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Mycteridæ	2
Pythidæ	2
Rhynchitidæ	2
Byrsopidæ	2
Otiorhynchidæ	7
Curculionidæ	23
Calandridæ	1
Scolytidæ	10
Anthribidæ	1
Apionidæ	2
Total: Families, 46; species (not including varieties)	514
No. of new species	17
Total No. species Lepidoptera and Coleoptera	829
Total No. new species Lepidoptera and Coleoptera	70

ON THE MOTHS COLLECTED BY PROF. SNOW IN NEW MEXICO.

BY A. R. GROTE, PRESIDENT OF THE NEW YORK ENTOMOLOGICAL CLUB.

The collections made by Prof. Snow, in New Mexico, have turned out to be of great scientific interest. Not only have there been valuable and showy insects taken, such as *Hyperchiria Zephyria*, *Gloveria Arizonensis*, *Halesidota Ambigua* and *Aspilates Viridirufaria*, but a number of new species, interesting from their structure, have been captured, such as *Trichothosia Parallela*. Again, light has been thrown on the geographical distribution. We have not only Californian and Eastern forms meeting as on common ground, but new representative species have occurred in these remote latitudes, such as *Copimamestra Occidenta*. The discovery in southern Arizona of *Phœgarista Sevorsa* Grote, a species allied to the East Indian *P. Transiens*, is very remarkable; and other just as interesting resemblances with Asiatic forms may be expected from this new field for entomological exploration. It must not be forgotten that my genus *Heliochilus* occurs only in India and the United States. So far as the moths are concerned, Prof. Snow has been the pioneer, and a worthier one could not be found.

The late Professor Agassiz, whose lectures were so charming from his learning, noble presence, and enthusiasm for natural history, held strongly for the distinctness of what are called "representative species." In the Moths, the near resemblance of some species, such as *Copimamestra Occidenta* and *Apatela Occidentalis*, with their European analogues, I have accounted for by the theory that they are descendants from a single member of a Tertiary circumpolar fauna. There is a parallel between vertical ascension and distribution towards the Pole, as Professor Agassiz has explained. This is shown by a comparison of the faunæ of Mount Washington and Labrador. I think I was the first to identify the Arctic *Laria Rossii*, from specimens taken by Mr. B. Pickman Mann on Mount Washington. I have also identified the *Agrotis Scropulana* and *A. Opipara*, of Mr. Morrison, described from Mount Washington, with the *Pachnobia Carnea* and *Agrotis Islandica* of Mr. Moeschler, from Labrador. After seeing Icelandic specimens, however, I doubt if the Labrador species is the same. Dr. Packard's "Islandica" from the West is quite a different insect, viz., *Agrotis Auxiliaris*, which is very variable, exhibiting several distinct varieties or races, and being found at very great elevations and also at very different levels. It is larger and totally different from either *Islandica* or *Opipara.*

The new species collected by Prof. Snow near Las Vegas, New Mexico, are in part as follows:

ALYPIODES n. gen.

Wings much longer than in *Alypia*, and the body smoothly scaled and longer. Legs not pilose. Vein 5 further from 4 than 3 at base. This form already loses the essential feature of *Alypia*, the short, broad wings, and approaches the lower genera. *Mariposa* suggests the present type, and may be congeneric.

ALYPIODES FLAVILINGUIS n. s.

Female: Blue black. On the cell are two brilliant metallic-blue, narrow patches, the first ovate, the last lunate; base with blue marks submedially and on costa. Three pale yellow patches, subovate, increasing in size outwardly, alternate with the blue spots. A pale yellow, small discal spot on secondaries. Fringes touched with white at apices of both wings. Tongue bright yellow. Head black; orbits pale yellow; collar with two yellow spots. Legs black; body blue black. *Expanse* 48 mil. *Length of body* 18 mil. New Mexico. Prof. F. H. Snow.

PYGOCTENUCHA n. gen.

Wings entire, a little narrower than in *Ctenucha.* Eyes naked. Front smooth. Abdomen tufted; in the female provided with a thick tuft, like some Bombyces belonging to the Dasychiræ or the Noctuid genus *Arzama.* Labial palpi rather slender, a little exceeding the front. Male antennæ ciliate, sub-pectinate; of the female serrate, each projection furnished with a single terminal seta. *Type: Ctenucha Harrisii* Boisd.

PYGOCTENUCHA FUNEREA n. s.

Male: Body slender; wings entire. Entirely dull black, with a yellow spot on each side of the collar and a yellow anal tuft. *Expanse* 30 mil. No. 1036.

This cannot remain in *Ctenucha*, nor can the succeeding species. Only one fresh specimen; the species cannot be mistaken, from the simplicity of its markings.

PYGOCTENUCHA HARRISII Boisd.

One female with the scarlet anal tuft large and thick, pale fawn-color at extremity. This form, as remarked by Mr. Hulst in redescribing it, is intermediate between *Ctenucha* proper and *Scepsis.*

ALEXICLES n. g.

A genus of *Bombycidæ,* differing from any one of our United States forms by the hairy eyes, more produced head, etc. The thick clypeal vestiture conceals the small palpi. The abdomen is short. Male antennæ pectinate.

Wings rather long and narrow, entire, subdiaphanous. In placing it among the Arctians, I have probably not found its best place. Cell in primaries closed. Veins 3–5 arising near together.

ALEXICLES ASPERSA n. s.

Male: Blackish fuscous, concolorous, subtransparent. The veins in primaries curiously marked with fine white streaks. No other markings, except that at end of cell is a black cloud, and subterminally there are some vague darker spots. A scarlet rim behind the eyes; anal tuft slight, with central scarlet hairs above; legs inwardly somewhat reddish. *Expanse* 32 mil. No. 916. New Mexico.

TELEA POLYPHEMUS var. OCULEA *Neumoegen.*

This fine variety, described by Mr. Neumoegen from female specimens taken in Arizona, differs from the type form of the species by an inner blue line and black ring and cloud surrounding the ocelli on primaries, so that they resemble the ocelli on secondaries in appearance. Professor Snow's specimen has the black shading reduced to a black ring.

HYPERCHIRIA ZEPHYRIA Grote.

The male *Hyperchiria zephyria* expands 72 mil.; the thorax and fore wings are olive-blackish, and the white spots at insertion of primaries distinct. A white oblique stripe from apex to middle of internal margin. Hind wings with pink hair along inner margin; the disc vivid yellow, bounded by a rounded black line, and containing the large black ocellus with central white streak and some blue scales. Terminal field pale fuscous, with a darker clouded shade line. Abdomen all pink above. Beneath, the wings are discolorlous, pale fuscous with a black, rounded spot on disc, with central white point, the latter repeated only on hind wings. Head dark; body and legs like hind wings beneath; antennæ, yellowish-testaceous pectinate. With its congener *H. pamina* and *Argyauges Neumoegeni*, this is one of the most notable additions to the catalogue of recent discoveries in the United States.

AGROTIS ATRIFRONS Grote.

This species may be known by the black mesial lines, the only marks on the brown shaded primaries, and by the black front; the s. t. line sometimes feebly marked in pale, also the median shade. No. 927. Professor Snow; New Mexico.

AGROTIS TERREALIS n. s.

Male and female: Very dark blackish-brown; allied to *Fennica* and *Turris.* Costa bright brown from base to middle. Stigmata moderate, concolorlous, set in a blackish shade. A submedian black streak at base, before the long black claviform. Lines obsolete; t. a. line marked inferiorly. Hind wings blackish fuscous, with interlined white-tipped fringes. Beneath unlined, fuscous,'with discal mark on hind wings. *Expanse* 36 mil. No. 936.

AGROTIS INVENUSTA n. s.

Female: Allied to *Atrifrons*, with the same simple markings. Blackish-ashen; median lines single, black, indistinct, slightly relieved by pale shade, and emanating from costal dots. Only the two lines can be made out. Thorax blackish-ashen; front and tips of palpi gray. Hind wings dark fuscous, a litle paler on the disc, veins soiled, no lines, a discal lunule. Beneath a curved black exterior line, very distinct on costal region of primaries, repeated on secondaries, and followed here by a faint sub-marginal shade; the discal mark on hind wings repeated. *Expanse*, 35 mil. No. 942. This species, although obscure in appearance, should be readily identified by the simple markings, and its affinity with *Atrifrons*, even in the markings beneath, which are plainer than usual. The color is different — the front pale, the hind wings darker than its ally.

AMMOCONIA DISTICHOIDES n. s.

Eyes naked. Tibiæ armed. Thorax with a central ridge. Much resembles *Orthosia Disticha*, of an even, olivaceous gray. Sub-terminal line faint, single, dark, starting from a black trigonate spot on costa. T. p. line punctate. A black interrupted terminal line. Stigmata approximate concolorous, indistinct, with a reddish stain. Median shade visible below reniform, marked between them on cell, and again above reniform on costa. T. a line thrice waved, single, black, marked on costal region. Thorax and head like primaries. Under the glass the primaries are dotted with fine black speckles. Hind wings pale fuscous, unlined, with paler fringes. Beneath, a common exterior black line, marked on veins over costal region, else obliterate. Discal marks. Smaller than *Aratrix*, to which it is nearest allied. New Mexico. "940." Prof. Snow. *Expanse* 35 mil.

MAMESTRA VITTULA n. s.

Female. Allied to the Californian *4-lineata*, the t. a. line not so oblique, and no reddish stain on fore wings; hind wings white, the veins very slightly soiled. Collar gray with blackish edge; thorax blackish gray. Primaries blackish gray. T. a. line scalloped. A black basal dash. Median space shaded with black. Stigmata small, concolorous dark gray. Terminal field paler gray, preceded by the s. t. line, which is irregular, shaded with black, especially at costa; a black dash at anal angle, before which the s. t. line is bent and heavily marked with black. Beneath no markings; hind wings white, dusted a little on costa; fore wings pale fuscous. No. 957. *Expanse* 24 mil.

MAMESTRA MIMULA n. s.

Male. Small-sized, a miniature of *Adjuncta*. Blackish, with an olive tinge to the ground color, recalling *Glaciata*. Reniform oval, yellowish white, prominent, with a central black mark. Orbicular a minute annulus, concolorous. Lines black, broken; a white mark submedially before t. p. line. S. t. line accompanied by broken white marks. Costal white dots evident.

Fringes cut with white. Hind wings blackish with white fringes, reflecting the band and dot of under surface. Beneath, a terminal series of black dots, very obvious and plain on primaries above. Body blackish fuscous. *Expanse* 25 mil. No. 1044. Prof. Snow, New Mexico.

HOMOHADENA EPIPASCHIA n. s.

This singular species has the look of one of the *Epipaschiæ.* Fore wings clayey gray, much shaded with black. Lines black, single; t. a. somewhat curved and thick; t. p. line widely bent, with an acute costal tooth towards base of wing; s. t. line denticulate, pale, followed by prominent interspaceal black marks, the black terminal space itself cut by pale veins; fringe dark. Hind wings blackish fuscous. Beneath, two bands on primaries and terminal black marks more faintly repeated; hind wings gray, with the band bent subterminally; a discal point. Above, a black cloud on center of disc apparently separating the pole, black clouded, undefined stigmata. *Expanse* 30 mil. No. 1013.

COPIMAMESTRA Grote.

The types of this genus are the European *Brassicæ* and a new North American species which agrees with it in structure and differs in color, so that the two species must have a common origin. Characters of *Mamestra,* except that fore tibiæ have a distinct claw. So long as one species alone was described, a separate genus might not be thought necessary. This remarkable addition to our Western fauna illustrates my theory that the northern forms in our North American fauna came by the north before the glacial epoch. (See my papers in *Popular Science Monthly, Silliman's Journal,* etc.) In the present case the species has not come east to our seaboard, as far as known.

COPIMAMESTRA OCCIDENTA n. s.

Eyes hairy. More blackish than *Brassicæ.* A greenish-white before s. t. line, continuous. Reniform greenish-white; a patch of same color on subbasal field. Orbicular not well marked. Lines black. Tegulæ lined with black. Hind wings pale, shaded outwardly. Discal spot on fore wings beneath pale, with central dot; on the whitish secondaries a solid dot. *Expanse* 42 mil. No. 943.

This genus may be objected to, but I cannot see any reason for overlooking the claw in *Copimamestra* and regarding it as of generic value in *Oncocnemis.* The sweeping criticism passed on my ideas of genera by Mr. Smith conveys an erroneous idea. I regard them as artificial groupings to a great extent, but I would not mix up species with armed and unarmed tibiæ, hairy and naked eyes, in one genus. I may have insisted too strongly on the value of single characters by themselves, but this is the extent of my fault, and it is largely one upon which an opinion is justifiable. The best reply is that Mr. Smith's adopted genera are sometimes based on single characters, and again on "modifications of a modification." For my part I cannot admit such genera as *Copihadena* and *Metahadena,* the genus *Eucalyptera,* etc., nor can I understand upon what principle Mr. Smith admits them.

TRICHORTHOSIA n. genus.

Eyes hairy, lashed. Body untufted. Fore tibiæ unarmed. Middle and hind tibiæ spinose. Vestiture loose, hairy. Antennæ (female) simple. Palpi rather short, terminal joint conical. Tongue rather weak. Wings entire; costal edge of primaries very straight and even; apices sharp. Allied to *Orthosia.*

TRICHORTHOSIA PARALLELA n. s.

Olive ochrey. Fore wing with terminal space white, contrasting. Subterminal line very even, rigid, double below an apical streak, which is the continuation of the outer and narrower component dark line. Hind wings fuscous, with pale fringes. Reniform with reddish stain. Median shade well expressed. *Expanse* 28 mil. New Mexico; Prof. Snow.

In this species the lines are double, faint; the outer median line followed by pale points; the orbicular merely a dark dot; the reniform with two inferior dark points; the median shade diffuse, and marked on costa. The resemblance is to other species with pale terminal space, such as *Glaea Anchoceli-oides* or the species of *Agrotis* allied to *Alternata.* The costa is straight, for the group to which it belongs, being more like *Jodia* in this respect; the outer margin is full and rounded.

CATOCALA VIOLENTA Hy. Edw.

One fresh specimen of this distinct species. It is much larger than *Ophelia,* to which it comes nearest, being nearly as large as *Coccinata,* the red of hind wings being a little like that of *Aholibah* in shade. I have examined a large series of *Verrilliana* in Mr. Neumogen's collection. This latter species is found from Texas to Arizona. The red of hind wings is an orange-red, and it fades to yellow in Arizona specimens taken by Mr. Doll. The three forms are, in my opinion, entirely distinct species; the Californian *Ophelia* differing in the gloss and color of primaries, as well as in the color of hind wings, from *Verrilliana.*

CELIPTERA BUCETUM n. s.

Brownish-gray; the outer line is upright, yellow, broad-edged with dark, and followed by a diffuse shading of black scales over subterminal space. Inner line single, undulate, with an outward exsertion on medium vein. S. t. line dotted. A discal curved line, sometimes expressed by two dots. A terminal series of black points. Hind wings, ochrey-gray. Beneath, rather bright ochraceous, immaculate. *Expanse* 30 mil. No. 979.

This fine species may be known by the plain, discolorous, bright-yellowish undersurface, and is, I think, a mimetic form of some butterfly, with which it may be associated; probably some Satyr belonging to a genus allied to *Coenonympha.*

TETRACIS VIDULARIA Grote.

This is congeneric with *Eugonia Coloradaria* G. and R., and I follow Dr. Packard in referring it to *Tetracis*. The outline is more like *Alniaria*, however, than any other species of *Tetracis*. The species may be known by its pale color, the presence of only a single outer common brown line, the absence of dots above; the brown marking on the fringe; beneath all four discal markings evident, the wings more irrorate. *Expanse* 37 mil. No. 1070. Prof. Snow, New Mexico. The male has not turned up yet.

ELLOPIA VITRARIA n. s.

Male. Slighter than *Bibularia* or *Fervidaria*. Pale ochrey yellow, wings transparent in appearance. The usual lines take the form of dots on the veins and are very faint, even, not angulated. There can, I think, from this character be no question of the ever-varying *Fervidaria*. The dotted appearance of the lines is peculiar. Body light yellow. Antennæ pectinate. *Expanse* 31 mil. New Mexico.

BAPTRIA (?) ALBOFASCIATA Grote.

The single specimen is rubbed and defective, but I believe it belongs to this species, which has not been recognized since its description. So far as I see it is not *Hastata*, but probably congeneric. Fresh examples will probably soon turn up, when it can be properly discussed.

EUBYJA MEXICANARIA n. s.

Male. Size large; antennæ long, plumose. Soft brown, irrorate with black; inner line black, produced in a long tooth on the cell. Outer median line, in general shape, as in *Quernaria*, but *even* and more oblique; a black discal clouded spot. Outside of the line the wing is brown. Secondaries gray-brown; two black sub-equal mesial lines, the inner more diffuse, the median shade fused with the minute discal point, which is visible beneath. Head and thorax blackish and smoky brown. Beneath, paler, with lines reflected. *Expanse*, 60 mil. *Length of body* 22 mil. New Mexico. No. 988.

This insect shows no whitish shades; the anterior line shows a very faint paler preceding shade. A female, sent under the number 989, and which, I think, is the opposite sex of the above, agrees with Packard's figure of *Quernaria*, except that the single mesial black line of secondaries is even, with a central tooth. The white shades are much less extensive, and limited to base of primaries, and beyond the outer median line sub-terminally. Brown; lines black; inner regularly curved, outer as in male; a white discal point. Thorax, in front, white shaded. Head and collar smoky brown. Hind wings without median shade, and showing the small, white-centered discal dot plainly. Abdomen white at base above; else blackish brown. Wings paler beneath, reflecting markings. Hind wings above with white shading and dotting outside of mesial black line corresponding with outer median line of fore wings. *Expanse* 58 mil. It is evident that Packard's figure is female *Quernaria.* This larger New Mexican species, in which the male shows no white, and the female much less than the figure, must be different. I am not certain that the two are associated correctly, and thought the female might be a form of *Quernaria,* and the male another species. *Cupidaria* is suspected to be the male of *Quernaria,* and with the differences in the lines in the two specimens before me, the possibility is that it may be so, in which case there can be no doubt that the present is distinct. At the moment, I cannot compare Abbot and Smith again, nor have I enough material to decide. *Pœnulataria* Grote, not mentioned Packard, can be neither of these species.

PHIGALIA LIXARIA n. s.

Male. Dark blackish-gray. Body slender. Antennæ pectinate. Disc crossed by three distict sub-parallel black lines, outwardly bent on costal region; the middle one more diffuse, being the median shade. A discal curved streak. Subterminal line somewhat dentate, broken, with a faint whitish shade. A terminal series of black dots. Hind wings pale fuscous, with two narrow faint lines and discal dots. Beneath pale, discolorous, no markings; a dot on secondaries. *Expanse* 38 mil. New Mexico. Number 1009.

Two other specimens belong, perhaps, to closely allied species, but on this slender material I do not describe them. One is larger and a little rubbed, while the type is fresh; the other smaller than type, and this last seems to have the antennæ less heavily pectinate.

This species differs from *Strigataria,* by the s. t. line being more bent and further from apices at costa, by the outer mesial line being more exserted medially, by the median shade being more diffuse and not running close to the anterior median line on the internal margin, by the darker color, the inner line on secondaries straight, with a median tooth and having discal dots; the lines on fore wings are distinct and black, the outer median line angulated; the new species is smoother and less irrorate. Following the variability of *Strigataria,* I would regard one of the above-mentioned specimens (No. 1010) as a variety; it is not quite fresh, and seems to differ but little. The other, with paler hindwings and smaller, seems different because the antennal pectinations appear shorter than in both the type and the variety of *Lixaria.*

LYCHNOSEA n. gen.

Allied to *Sicya* and *Heterolccha.* Labial palpi extending straight forward beyond the front, which they exceed, the terminal joint concealed by the long vestiture. Male antennæ heavily pectinated, long, the pectinations tapering slightly and then becoming suddenly reduced at tip. Female antennæ simple. Fore wings with a distinct angulation in the female on exterior border, rounded in male; on secondaries a blunt point in both sexes. Abdomen not exceeding secondaries. Hind tibiæ with two pair of spurs.

LYCHNOSEA AULULARIA n. s.

Dull yellow. In the male the terminal border of primaries is washed with purple brown outside the outer scalloped median line, which runs from costa to inner margin. Inner line single, faint, irregular. A discal dot. Hind wings with medial line narrow and indistinct, faintly washed with purplish, subirrorate. The female is smaller than male, paler, more yellow, still the basal and terminal field of primaries show a purplish shade. The hind wings are paler, more yellow with yellowish fringe. Beneath bright ochre yellow, strigose; in male fringe and apices purplish. A common extra mesial ochre line; faint discal dots. Male *expands* 40, female 34 mil. New Mexico and Arizona.

This may be known by the primaries being more or less purplish at base and terminally, the wing being divided into three fields by the two median lines, the outer oblique, well removed outwardly, rather regularly scalloped. The ground color is rather faded yellow, somewhat bright on the wide median space. The long palpi projected straight forwards, the converging facial hairs, the long, heavily pectinated plumose male and simple female antennæ, and the sexual difference in shape of fore wings, prevent me from referring the moth to any genus in Dr. Packard's Synopsis, nor can I recognize the species, which must be very common, among his figures or descriptions. This is one of the higher genera of the family, and should be catalogued among the first, after *Tetracis* and *Angerona*. It is singular, as before stated, that the editors of the Brooklyn "List," who show so little freedom of thought in their work and take so many liberties in their preface, should have followed Dr. Packard's arrangement in his monograph, and commenced with the lower genera. Were we in possession of a knowledge of the sub-order from the earliest time, such an arrangement would be philosophical; and, like the geologists, who commence with the primary rocks, and finish their exposition with the quartenary formations, we could ascend from the earliest to the latest species. But in the vast majority of works on botany and zoölogy, a linear arrangement commences with the highest groups, which are assumed also to be the latest to come into existence.

CHRYSEUDETON AVERNALIS n. s.

No ocelli. Pale ochrey-brown. A diffuse white sub-basal band, including a brown spot. A median white band angulated at the middle, crossed by a longitudinal discal black streak. The outer band is exserted over median veinules, and dyed within by brown scales. Subterminal white band tapers inferiorly, and does not reach the internal margin. Fringe brown. Hind wings white, with a median patch dotted with black scales; a yellow terminal line. A row of black spots on the margin, less conspicuous than usual, but faint traces of metallic scales. Fragments of two brown inner fasciæ, marked on internal margin. Beneath powdered with brownish. The white outer and subterminal bands make a V-shaped mark on fore wings outwardly. On secondaries, the terminal dots reduced. Two specimens. *Expanse* 22 mil.

APPENDIX.

For the convenience of American entomologists, the following descriptions of New Mexico moths taken by Prof. Snow, are reproduced from the *Annals and Magazine of Natural History* (London) for January, 1883:

Agrotis bimarginalis n. s.

Allied to *variata* and *obsërvabilis.* Head and thorax rich orange-brown; a broad pale leather-brown or fawn-colored costal stripe to terminal posterior line; terminal space frosted with white. Rest of the wing deep brown› shaded with black. Transverse posterior line even; stigmata obscured by the blackish shading; subterminal space black on costa. Hind wings pale fuscous; abdomen brownish terminally. Beneath with dots and a common even exterior shade band. No. 924, *Expanse* 36 millim.

Agrotis circumdata n. s.

Belongs to the *gravis* group, the handsomest species yet found of this group. Terminal space light leather-brown, and joining an equally broad similar band along internal margin, which is edged above and below by two deep velvety black curved longitudinal stripes at base of wing. These bands vividly contrast with the black subterminal space and brownish-black surface of the wing. The dentate transverse anterior line and the even transverse posterior line partly visible. Stigmata contrasting; orbicular small, pale, with dark central dot; reniform small, pale, upright, not constricted, with brown line. Head and collar rich ochre-brown; thorax blackish. Hind wings fuscous, with reddish fringes. Beneath powdered with reddish brown, common band and discal dots distinct on secondaries. No. 925. *Expanse* 35 millim.

Agrotis planalis n. s.

Male. Allied to the *Normaniana-esurialis* species. Fore wings and thorax concolorous, dark chestnut brown; subterminal line narrow, commenced in black, with a subcostal tooth pointing inwardly, thence straightly, indistinctly scalloped to inner margin. Lines double, marked on costa; transverse posterior line faint, not much bent; stigmata small, concolorous, set in a black discal shade. Thorax a little darker than primaries above. Beneath distinctly marked. Fore wings blackish to subterminal line, beyond which the terminal space is pale; outer mesial line marked on costa; hind wings pale, with distinct extramesial line and discal dot. Abdomen brownish. Hind wings above without well-defined lines, paler at base, shaded broadly with fuscous outwardly. Antennæ slightly pectinate. No. 1043.

Agrotis grandipennis n. s.

One of the largest species, the female expands 52 millim. Rich purplish red-brown, veins marked incompletely with black, terminal black marks distinct. Transverse anterior line dentate, a large submedian tooth, lines double, fine, black. Orbicular small, round, pale, with dark dot; a dash connects it with the shadowy reniform. Transverse posterior line marked by double costal black dots, else obsolete. Hind wings pale fuscous, veins marked. Abdomen shaded with reddish; thorax like fore wings. Beneath whitish well-defined dots. Nos. 948 and 949. All the tibiæ spinose. Allied to *piscipellis.*

Agrotis beata n. s.

Delicate dark mouse- or pigeon-gray; belongs to the *anicla* group. A black velvety band or collar in front. Lines single, faint and narrow. Transverse posterior line forming a single angle. Subterminal line pale, preceded above by a black shading, and followed by a narrow black shade. Median shade diffuse, black. Fringes pink. Hind wings nearly white, smoky outwardly. Beneath without lines or dots. Head and thorax gray, like primaries. Abdomen pale gray, somewhat reddish at tip and beneath. No. 929. A lovely species. *Expanse* 36 millim.

COPIMAMESTRA n. gen.

This agrees with *Mamestra,* except that the fore tibiæ are armed with a distinct large claw. Eyes hairy. Abdomen tufted. Tibiæ unarmed. The types are the European *C. brassicæ* and the following new species:

Copimamestra occidenta n. s.

Darker and more blackish than *brassicæ.* A greenish-white broad band before the subterminal line, continuous. Reniform greenish-white. A patch of the same color on subbasal field. Orbicular not well defined. Median lines black. Tegulæ lined with black. Hind wings pale, shaded outwardly with blackish. Beneath, the discal spot on fore wings is pale with central dot. The whitish secondaries show a well-defined dot. *Expanse* 42 millim. No. 943.

Grotella Dis n. s.

This species seems a little larger than *7-punctata,* with the dots obliterated on the white primaries. Unlike the latter, the hind wings are black with white fringes. Beneath also black, the white fringes on both wings strongly contrasting. I have been disposed hitherto to regard this as a variety. One specimen also in Mr. Neumoegen's collection from Arizona. *Expanse* 26 millim. New Mexico. No. 1018.

The contrast between the white primaries and blackish secondaries on the upper surface is peculiar. If only a variety it is one worthy of a separate designation.

PROCHŒRODES, Gr.=*Eutrapela,* Packard.

According to Mr. Butler, the genus *Chœrodes* is preoccupied in Coleoptera. I have shown, in the "Canadian Entomologist," that *Eutrapela* is used by Hubner first for a species of *Selenia;* and, in including *clemataria,* Hubner may have thought the moth congeneric. A new name is therefore necessary for our genus, with *transversata,* Drury, as type. Guénée's limitation of *Eu-*

trapela to *clemataria* is not followed by Dr. Packard, whose genus *Eutrapela* corresponds with *Chœrodes* of Guénée plus the *Eutrapela clemataria* of the "Species Général."

Prochœrodes catenulata n. s.

Female: Allied to *nubilata*, but differing by the wings beneath being pale and having a continuous, even, dark outer line *dotted* or *accented* on the veins, equally distinct on both wings. All the wings show the black discal dots equally distinct above and below. Base of primaries grayish ochrey, defined by an irregular brown line, bent outward on cell. Median space fawn-brown, freer from strigæ than wing elsewhere. Outer line brown, angled to costa, followed by a diffuse blackish subterminal shade, continued more faintly on secondaries. Outside the transverse posterior line, both wings grayish, as at base, and the strigæ are, here as there, again prominent. Apex acute; outer margin with a rounded angle, less defined than Packard's figure (61); hind wings with smaller angle and with the tips of the veins determinate. A larger insect, apparently, than the Californian species. *Expanse* 45 mil. The black terminal clouding is continuous and reaches apex.

Phasiane cruciata n. s.

Gray; inner line black, slightly outwardly bent at middle; the close and parallel median shade runs straightly down, and at the bend touches it; a curved shade line before the black inner line; so that here we have three lines close together and partially fused, differing in distinctness. Outer line black, sinuous, bent outwardly on costal region, the subterminal, fainter, runs close to it, and they nearly touch opposite the cell; at the place of the subterminal line the wing is whiter, free from speckles or strigæ, also on median space. Hind wings gray, finely irrorate; fore wings reflecting lines. No. 1002. *Expanse* 27 mil. Easily known by the transverse anterior line forming two forks from its middle junction with the median shade. Discal dots very small.

Caripeta æqualiaria n. s.

Female: Close to *angustiorata*. Fore wings rich rosy brown and ochrey brown, the paler shadings being whitish yellow. Transverse anterior line upright, dark brownish, the cells before it to base being diffusely filled with yellowish white. This line in its ally forms a wide tooth, narrowing the median space which is here wanting, the median lines being subparallel and the median field of the same width. Two indistinct pale spots on the cell. Outer line followed by a narrow diffuse yellow-white shade, like anterior line, toothed at extremity of median vein. Subterminal line a succession of dark brownish blocks on interspaces, followed to the edge by yellow-white triangular marks. Hind wings whitish, shaded on veins with yellow. Thorax fawn. Beneath reflecting markings; hind wings with a broken ochre line. *Expanse* 38 mil. New Mexico. No. 995.

Parœdis obliqualis n. s.

Front flat; maxillary palpi stout and scaled, as long as the labial, appearing between them and the front. Allied to *funalis*, and similarly sized. Gray, shaded with smoky and brown. Inner line single, oblique, very faint, apparently angulate on cell. Outer line parallel with this, *even* and oblique, preceded by a faint white shade. Subterminal line black, denticulate, running from apex inwardly to a point below the middle, whence it runs close and parallel to the outer line to the internal margin; it is touched with white below the middle, after which it is even and black. There is a wide brown clouding across the wing from the outer line to the external margin opposite the cell; above internal angle a large free gray space. Fringes dark. Reniform a faint, quadrate, upright, blackish, shaded spot. Hind wings pale fuscous, with two subterminal lines: the outer is flecked with white before anal angle; and opposite this flecking, the fringes are touched at their tips with black. There is a dotted line on secondaries beneath; and on fore wings the reniform is very distinct, blackish, and square. As compared with the figure of *Parœdis funalis*, N. Am. Ent. i. pl. v. fig. 4 (fore wing, sub *Ædis*, changed to *Parœdis* in "New Check List"), the *even* outer median line will distinguish *obliqualis*. Attention must be paid to the structure of the head in this and allied genera to locate the species. No. 1019.

Crambus dimidiatellus n. s.

Size large. Costal region broadly olivaceous, edged by a darker linear shade below. Rest of the wing with the veins striped with white, and covered medially by a broad white shade, widening at external margin; below this the ground-color is again somewhat olive. Hind wings and fringes pale silky fuscous. Fringes and fore wings white, faintly dotted. *Expanse* 36 millim. No. 968. Labial palpi long; approaches the *propexus* group. I do not know the male.

Nephopteryx auranticella n. s.

Although I have but a single specimen, very bright, the extraordinary color and size will enable the species to be at once recognized, and perhaps better placed when the male is known. Fore wings bright orange-red, color of *caripeta*. A white somewhat diffuse longitudinal stripe from base to end of median vein, followed by slight oblique white clouding. Subterminal line white, contrasting with the red wing, running inwards a little on costal and internal margins. The wing is more yellowish or orange at base, redder outwardly. Tegulæ and sides of collar orange. Head above and collar centrally white. Legs red outwardly; palpi red, white at base. Thorax beneath white. Hind wings pale translucent fuscous, with a fine terminal line and white fringes, interlined at base. Beneath yellowish fuscous, with a red mark on primaries at costal inception of transverse line. *Expanse* 30 mil. New Mexico. No. 1021. This brilliant species wants the usual inner transverse line on fore wings above.